PATENT
ATTORNEY DOCKET NO.: KCX-663 (18809)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

Appellants:	Weber, et al.	Examiner:	Sang K. Kim
Appl. No.:	10/720,979	Art Unit.:	3654
Filed:	November 24, 2003	Deposit Acct. No.:	04-1403
Title:	System and Process for Controlling The Deceleration and Acceleration Rates of A Sheet Material in Forming Absorbent Articles	Confirmation No.:	3395
		Customer No.:	22827

Mailstop Appeal Brief - Patents
Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Post Office Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Honorable Commissioner:

Appellants submit the following brief on appeal in accordance with 37 C.F.R. § 41.37:

1. REAL PARTY IN INTEREST

The real party in interest in this matter is the assignee of record, Kimberly-Clark Worldwide, Inc.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to the Appellants or the Appellants' legal representative which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

3. STATUS OF CLAIMS

Claims 45-78 are pending in the application, including independent claims 45 and 62. All of the claims are attached hereto as Appendix A.

In the Final Office Action dated May 18, 2006, the claims were rejected under 35 U.S.C. §112 and under 35 U.S.C. §103. Applicants filed an Amendment After Final on August 18, 2006 which was not entered into the record for the reasons indicated in an Advisory Action dated September 5, 2006. Applicants then filed another Amendment After Final on November 16, 2006 which was entered into the record as stated in the Advisory Action dated December 7, 2006. The amendments filed on November 16, 2006 overcame the rejection under 35 U.S.C. § 112. The rejections under 35 U.S.C. § 103, however, were maintained.

4. STATUS OF AMENDMENTS

The following is a statement of the status of any amendments filed subsequent to the final rejection dated May 18, 2006. After the Final Office Action, Applicants filed an Amendment on August 18, 2006 which was not entered into the record for the reasons indicated in an Advisory Action dated September 5, 2006. Applicants filed another Amendment on November 16, 2006 which was entered into the record as stated in the Advisory Action dated December 7, 2006. No other amendments have been filed.

5. SUMMARY OF CLAIMED SUBJECT MATTER

In general, the presently pending claims are directed to a process for forming an absorbent article, such as a diaper, feminine care article, an incontinence article or a child's training pants. See, e.g., Pg. 7, lines 3-12. During the process, a first material is

unwound into a festoon including a plurality of rotatable guide rolls through which the material is threaded. Pg. 7, line 3 – Pg. 8, line 11. In accordance with the present invention, the deceleration and/or acceleration rates of the guide rolls in the festoon are controlled using a plurality of drive devices associated with selected guide rolls. Pg 8, lines 19-21. By actively accelerating or decelerating the guide rolls instead of relying on material or web tension to increase or decrease the speed of the guide rolls, the process offers various advantages and benefits. For example, by controlling the acceleration and/or deceleration rates of the guide rolls, the acceleration and deceleration rates of the spindles can be increased, and the festoon capacity can be minimized. Pg. 8, lines 21-26. Tension swings of the material in the festoon may also be reduced since web tension changes are not required to accelerate and decelerate the idlers. Pg. 8, lines 26-28. Ultimately, the process allows for faster speeds without having to increase festoon storage capacity which ultimately increases the throughput of product being produced. Pg. 8, lines 28-30.

Independent claim 45, for instance, is directed to a process for forming an absorbent article comprising unwinding a roll of a first material at a determined rate for processing using an unwind device. Pg. 3, lines 12-18. The unwind device is in communication with a festoon. Pg. 3, lines 27-28. The festoon includes a plurality of rotatable guide rolls through which the first material is threaded. Pg. 11, lines 20-22. The festoon accumulates a determined length of the first material and wherein, during steady state, at least certain of the guide rolls are not actively driven such that the guide rolls comprise idler rolls. Pg. 14, lines 28-33.

The rate at which the roll of the first material is unwound is decreased during the process causing the accumulated length of material contained in the festoon to be released so that the rate at which the first material is moving downstream of the festoon remains substantially unchanged. Pg. 3, line 30 to Pg. 4, line 2. Certain of the guide rolls in the festoon are then decelerated with a drive device when the rate at which the roll of the first material is unwound decreases. Pg. 4, lines 3-7. The guide rolls are decelerated independent of each other. Pg. 4, lines 3-7.

During the process, the first material being unwound is fed into a process for forming absorbent articles. Pg. 5, lines 27-33. The first material is incorporated into the absorbent article, wherein the absorbent article comprises a liner material, an outer cover material, and an absorbent material positioned in between the liner material and the outer cover material. Pg. 17, lines 6-18.

Similarly, independent claim 62 is also directed to a process for forming an absorbent article. In claim 62, a roll of a first material is unwound at a determined rate for processing using an unwind device. Pg. 3, lines 12-18. The unwind device is in communication with a festoon. Pg. 3, lines 27-28. The festoon includes a plurality of rotatable guide rolls through which the first material being unwound is threaded. Pg. 11, lines 20-22. The festoon accumulates a determined length of the first material. Pg. 3, line 32 to Pg. 4, line 2.

The rate at which the roll of the first material is unwound decreases during the process causing the accumulated length of material contained in the festoon to be released. Pg. 3, line 30 to Pg. 4, line 2. In accordance with the present disclosure,

certain of the guide rolls in the festoon are decelerated with a drive device when the rate at which the roll of the first material is unwound decreases. Pg. 4, lines 3-7. The guide rolls are decelerated independent of each other and are decelerated based upon an amount of inertia contained in the respective guide rolls so as to minimize tension increases or decreases in the first material. Pg. 15, lines 14-20.

In claim 62, similar to claim 45, the first material is unwound and fed into a process for forming absorbent articles for being incorporated into the article. Pg. 5, lines 27-33. The absorbent article comprises a liner material, an outer cover material, and an absorbent material positioned in between the liner material and the outer cover material. Pg. 17, lines 6-18.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

In the Final Office Action, independent claims 45 and 62 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 5,163,594 to Meyer in view of U.S. Patent No. 6,562,167 to Coenen.

7. ARGUMENT

Appellants respectfully submit that the presently pending claims are patentable over the cited references.

As stated above, Independent claims 45 and 62 are both directed to a process for forming an absorbent article. Both claims include the steps of unwinding a roll of a first material at a determined rate for processing using an unwind device. The unwind device is in communication with a festoon. The festoon includes a plurality of rotatable

guide rolls through which the first material is threaded. The festoon accumulates a determined length of the first material.

I. Independent claims 45 and 62 are patentable over Meyer in view of Coenen

Both claims 45 and 62 also require the step of:

> Decelerating certain of the guide rolls in the festoon with a drive device when the rate at which the roll of the first material is unwound decreases at the unwind device, the guide rolls being decelerated independent of each other.

In the Final Office Action, independent claims 45 and 62 were rejected as allegedly being obvious over Meyer in view of Coenen. In stark contrast to the currently pending claims, however, the guide rolls contained in the accumulator disclosed in Meyer and the guide rolls contained in the festoon disclosed in Coenen **are not in any way decelerated with a drive device during operation of the accumulator or festoon**.

Meyer, for instance, discloses an accumulator containing a row of spaced apart rollers on one swingable arm that cooperates with another row of rollers on another swingable arm. Figure 2 from Meyer, which represents a side view of the accumulator, is as follows:

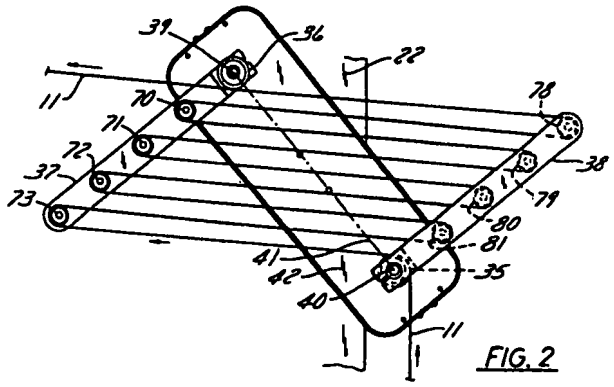

FIG. 2

As shown above, the accumulator disclosed in Meyer includes an outfeed roller 36, an infeed roller 35, and rollers 70, 71, 72, 73, 78, 79, 80 and 81 positioned in between the outfeed roller and the infeed roller.

As stated at the bottom of column 4, the outfeed roller 36 is journaled for rotation on an axle shaft 39 by means of two internal bearings 59 and 60. Meyer, for instance, states in column 5 starting at line 2 that the "tubular outfeed roller 36 is preferably composed of a strong lightweight material so the roller has low inertia and requires the least amount of torque to start and stop". Similarly, infeed roller 35 is journaled for rotation on an axle shaft 40. As stated in column 5, at line 14, the remaining rollers 70-73 and 78-81 are also "freely rotatable on respective shafts". Thus, all of the rollers contained in the accumulator described in Meyer are freely rotatable on some type of axle or shaft and are all made from "a lightweight rigid material for the sake of minimizing inertia". (Column 5, lines 19-20)

In the Advisory Action dated December 7, 2006, however, the Examiner stated that:

> Meyer teaches the rollers 35, 36 journaled for rotation on each axle shaft with bearings and at the end of each shaft, Meyer discloses a drive mechanism using chain loops 126,115, 118 and pneumatic actuators 96, 97, which are connected to the shaft, see figures 4-5, and in column 5, lines 28-35 and column 7, lines 21-30. Thus, the rollers can decelerate with a drive device.

Although the chain loops in Meyer do rotate the axles 39 and 40, in contrast to the Examiner's position, the chain loops do not in any way rotate or drive the infeed roller 35 or the outfeed roller 36. Instead, as stated above, the infeed roller 35 is freely rotatable on the axle shaft 40, while the outfeed roller 36 is freely rotatable on the axle shaft 39.

For example, reproduced below is Figure 4 from Meyer which shows the chain loops described by the Examiner:

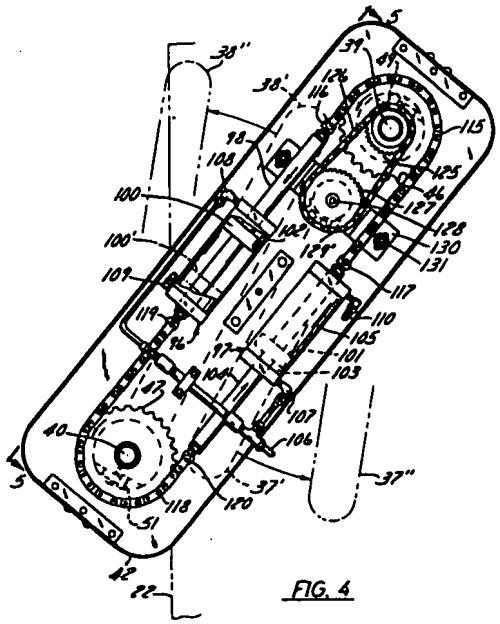

FIG. 4

As shown above, a chain 118 engages a sprocket 47 for rotating the axle shaft 40. Similarly, a chain 115 engages a sprocket 46 for rotating the axle shaft 39. Axle shaft 39 is also fastened to a sprocket 125 which is engaged by a chain loop 126 for driving another sprocket 127. The sprocket 127 is fastened to the shaft 128 of a potentiometer 129. As stated in Meyer, the potentiometer produces an analog signal relating to the angular position of the arms.

As stated in column 5, starting at line 28 in Meyer, the axle shafts 39 and 40 are connected to the arms 37 and 38 of the accumulator (see Figure 2 above). Two pneumatic actuators 96 and 97 are used to move the chains 115 and 118. The chains engage the sprockets 46 and 47 for rotating the axle shafts 39 and 40 and thereby rotating the arms 37 and 38. In Meyer, the arms 37 and 38 rotate towards and away from each other in order to vary the amount of material contained in the accumulator.

With respect to the currently pending claims, however, the chains do not in any way affect the rotation of the infeed roller 35 or the outfeed roller 36. Contrary to the Examiner's assertion, the chains 115 and 118 do not decelerate the rollers 35 and 36. Consequently, even if Meyer were somehow combined with Coenen, various elements of the claims would still remain absent. Consequently, Applicants submit that independent claims 45 and 62 patentably define over Meyer in combination with Coenen.

In conclusion, it is respectfully submitted that the claims are patentably distinct over the prior art of record and that the present application is in complete condition for allowance. As such, Appellants respectfully request issuance of the patent.

Respectfully submitted,

DORITY & MANNING, P.A.

August 22, 2007
Date

BY: _____

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8. CLAIMS APPENDIX

Claims 1 - 44 Canceled.

45. A process for forming an absorbent article comprising:

unwinding a roll of a first material at a determined rate for processing using an unwind device, the unwind device being in communication with a festoon, the festoon including a plurality of rotatable guide rolls through which the first material being unwound is threaded, the festoon accumulating a determined length of the first material and wherein, during steady state, at least certain of the guide rolls are not actively driven such that the guide rolls comprise idler rolls;

decreasing the rate at which the roll of the first material is unwound causing the accumulated length of material contained in the festoon to be released in order for the rate at which the first material is moving downstream of the festoon to remain substantially unchanged;

decelerating certain of the guide rolls in the festoon with a drive device when the rate at which the roll of the first material is unwound decreases at the unwind device, the guide rolls being decelerated independent of each other; and

wherein the first material being unwound is fed into a process for forming absorbent articles, the first material being incorporated into the absorbent article, the absorbent article comprising a liner material, an outer cover material, and an absorbent material positioned in between the liner material and the outer cover material.

46. A process as defined in claim 45, further comprising the steps of:

increasing the rate at which the roll of the first material is unwound at the unwind device after the rate has been decreased; and

accelerating certain of the guide rolls in the festoon with the drive device when the rate at which the roll of material is unwound increases, the guide rolls being accelerated independent of each other, the guide rolls being accelerated at a rate that generally corresponds to the rate at which the first material is accelerated through the festoon.

47. A process as defined in claim 45, wherein the festoon includes from about four (4) to about (10) guide rolls.

48. A process as defined in claim 45, wherein the guide rolls that are decelerated by a drive device are decelerated according to a predetermined deceleration profile.

49. A process as defined in claim 48, wherein the speed of the guide rolls being decelerated by a drive device is monitored and sent to a controller, the controller being configured to decelerate the guide rolls according to the deceleration profile based upon the monitored speed of each guide roll.

50. A process as defined in claim 45, wherein the drive device comprises a braking device.

51. A process as defined in claim 45, wherein the drive device comprises a stepper motor or a servo motor.

52. A process as defined in claim 45, wherein the festoon includes an upstream guide roll, a plurality of midstream guide rolls, and a downstream guide roll, and wherein the upstream guide roll and the midstream guide rolls are decelerated by drive devices.

53. A process as defined in claim 45, wherein the rate at which the roll of material is unwound is decreased and temporarily stopped.

54. A process as defined in claim 45, wherein the first material being unwound from the roll is spliced to a second roll of material during the decrease in rate at which the roll of material is unwound.

55. A process as defined in claim 45, wherein the festoon includes a first set of guide rolls spaced from a second set of guide rolls, the first set of guide rolls being in operative association with a carriage, the carriage being movable towards the second set of guide rolls when the rate of material exiting the festoon is greater than the rate of material entering the festoon.

56. A process as defined in claim 45, wherein the roll of material is unwound at a rate of at least 100 feet per minute.

57. A process as defined in claim 45, wherein the festoon accumulates a length of material sufficient to sustain a stoppage of from about one (1) second to about five (5) seconds during the unwind process.

58. A process as defined in claim 45, wherein the absorbent article is one of diapers, child's training pants, feminine care articles, and incontinence articles.

59. A process as defined in claim 45, wherein the first material comprises the liner material, the cover material, or the absorbent material.

60. A process as defined in claim 45, wherein the first material has a basis weight of less than about 25 gsm.

61. A process as defined in claim 55, wherein the carriage moves toward and away from the second set of guide rolls due to tension of the first material in the festoon.

62. A process for forming an absorbent article comprising:

unwinding a roll of a first material at a determined rate for processing using an unwind device, the unwind device being in communication with a festoon, the festoon including a plurality of rotatable guide rolls through which the first material being unwound is threaded, the festoon accumulating a determined length of the first material

decreasing the rate at which the roll of the first material is unwound causing the accumulated length of material contained in the festoon to be released in order for the rate at which the first material is moving downstream of the festoon to remain substantially unchanged;

decelerating certain of the guide rolls in the festoon with a drive device when the rate at which the roll of the first material is unwound decreases at the unwind device, the guide rolls being decelerated independent of each other, the guide rolls being decelerated based upon an amount of inertia contained in the respective guide roll so as to minimize tension increases or decreases in the first material; and

wherein the first material being unwound is fed into a process for forming absorbent articles, the first material being incorporated into the absorbent article, the absorbent article comprising a liner material, an outer cover material, and an absorbent material positioned in between the liner material and the outer cover material.

63. A process as defined in claim 62, further comprising the steps of:

increasing the rate at which the roll of the first material is unwound at the unwind device after the rate has been decreased; and

accelerating certain of the guide rolls in the festoon with the drive device when the rate at which the roll of material is unwound increases, the guide rolls being accelerated independent of each other, the guide rolls being accelerated at a rate that generally corresponds to the rate at which the first material is accelerated through the festoon.

64. A process as defined in claim 62, wherein the festoon includes from about four (4) to about (10) guide rolls.

65. A process as defined in claim 62, wherein the guide rolls that are decelerated by a drive device are decelerated according to a predetermined deceleration profile.

66. A process as defined in claim 65, wherein the speed of the guide rolls being decelerated by a drive device is monitored and sent to a controller, the controller being configured to decelerate the guide rolls according to the deceleration profile based upon the monitored speed of each guide roll.

67. A process as defined in claim 62, wherein the drive device comprises a braking device.

68. A process as defined in claim 62, wherein the drive device comprises a stepper motor or a servo motor.

69. A process as defined in claim 62, wherein the festoon includes an upstream guide roll, a plurality of midstream guide rolls, and a downstream guide roll, and wherein the upstream guide roll and the midstream guide rolls are actively decelerated by drive devices.

70. A process as defined in claim 62, wherein the rate at which the roll of material is unwound is decreased and temporarily stopped.

71. A process as defined in claim 62, wherein the first material being unwound from the roll is spliced to a second roll of material during the decrease in rate at which the roll of material is unwound.

72. A process as defined in claim 62, wherein the festoon includes a first set of guide rolls spaced from a second set of guide rolls, the first set of guide rolls being in operative association with a carriage, the carriage being movable towards the second set of guide rolls when the rate of material exiting the festoon is greater than the rate of material entering the festoon.

73. A process as defined in claim 62, wherein the roll of material is unwound at a rate of at least 100 feet per minute.

74. A process as defined in claim 62, wherein the festoon accumulates a length of material sufficient to sustain a stoppage of from about one (1) second to about five (5) seconds during the unwind process.

75. A process as defined in claim 62, wherein the absorbent article is one of diapers, child's training pants, feminine care articles, and incontinence articles.

76. A process as defined in claim 62, wherein the first material comprises the liner material, the cover material, or the absorbent material.

77. A process as defined in claim 62, wherein the first material has a basis weight of less than about 25 gsm.

78. A process as defined in claim 72, wherein the carriage moves toward and away from the second set of guide rolls due to tension of the first material in the festoon.

9. EVIDENCE APPENDIX

None

10. RELATED PROCEEDINGS APPENDIX

None